Westslope Cutthroat Trout Conservation in the Pend Oreille Basin:
Restoring native fish in the Pend Oreille Basin
Public Information Sheet I: February 2, 2017

Why are conservation efforts in this area focused on native Westslope Cutthroat Trout?
Westslope Cutthroat Trout (WCT) are native to the Pend Oreille Basin, historically occupying over 99% of the tributary streams. Today, WCT are present in only 35% of these streams.

What are the likely impacts of not locally restoring native Westslope Cutthroat Trout?
WCT have been proposed twice for listing under the Endangered Species Act (ESA). Continued decreases in population size and range could lead to ESA listing. Restoration actions will expand overall WCT distribution to a larger portion of their historical range, thereby contributing to the conservation of this important native species and reducing the likelihood of ESA listing.

Who is responsible for monitoring and managing fish populations in Washington?
Washington State is committed to preserving natural ecosystems and resources. The Washington Department of Fish and Wildlife (WDFW) is charged with the mission, "to preserve, protect and perpetuate fish, wildlife and ecosystems while providing sustainable fish and wildlife recreational and commercial opportunities." on a state-wide level. To meet this commitment in the Pend Oreille Basin, WDFW and Kalispel Tribe of Indians' Natural Resources Department (KNRD) are working together with partners from various agencies to restore native fish populations.

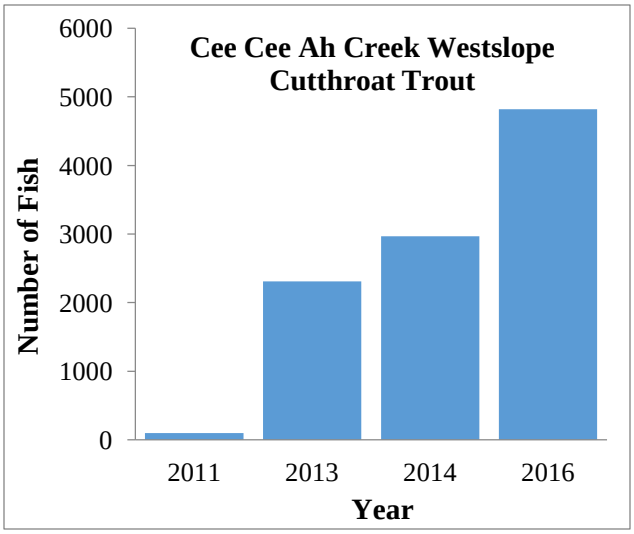
Why is removal of non-native fish necessary prior to restoring native Westslope Cutthroat Trout?
Competition for resources, predation, and interbreeding with non-native fish species are among the greatest contributors to the decline of native fish species such as WCT. Suppression or removal of non-native fish in areas prioritized for WCT restoration allows for the greatest probability of success for long-term population persistence.

What methods are available to remove non-native fish species?
There are two general methods of fish removal available for resource managers: piscicide (pesticide for fish) treatments and mechanical removal. Rotenone, the most commonly used piscicide, is widely used as a conservation tool and has been demonstrated to be safe and cost-effective. Rotenone is approved by the Environmental Protection Agency (EPA) for use in streams, and it has been used safely and successfully throughout the world and locally within tributaries to Box Canyon Reservoir. Mechanical methods of fish removal include electrofishing, netting, dewatering, and traditional angling techniques. Resource managers determine the preferred method for removal of non-native fish from a particular location based on site conditions and management objectives. Both methods can be used safely and effectively to support native fish restoration.

What is the difference between mechanical removal and piscicide application?
Mechanical removal consists of catching non-native fish by various means and removing them from a stream while leaving native fish. Mechanical removal is expensive and largely ineffective for complete removal of target fish populations from a stream. Mechanical removal of non-native fish must be repeated consistently over time to suppress non-native species to help maintain and increase healthy native fish populations. Mechanical suppression is the most effective tool when used in streams where migration of non-native fish from outside the system cannot be prevented. Applying a piscicide such as rotenone is an effective way to remove all fish from a stream, which is then restocked with native fish. To ensure that non-native fish cannot naturally repopulate the stream, piscicide removal is often used in streams that are isolated from other fish populations by a natural barrier such as a waterfall or manmade structure. Barring

illegal restocking, piscicide treatments followed by outplanting of native fish can result in streams with self-sustaining, healthy populations of native fish. This successful outcome has been demonstrated in a recent joint project carried out by WDFW and KNRD at Cee Cee Ah Creek in the Pend Oreille Basin.

How do we know these conservation efforts will be effective?
WDFW and KNRD recently conducted a conservation project using piscicide treatment which successfully eliminated non-native Brook Trout from the upper reaches of Cee Cee Ah Creek with no negative impacts to local property, livestock, water, or wildlife. Protected by Cee Cee Ah Falls, a natural fish passage barrier, re-invasion by non-native fish has not occurred. Genetically-pure WCT were successfully reintroduced from local sources in 2011 and have since expanded in population size and distribution within the project area (see figure). KNRD and WDFW want to repeat this success to strengthen WCT populations in the Pend Oreille Basin.



What monitoring is in place to evaluate success of the Westslope Cutthroat Trout restoration?
Monitoring of the species of fish present in a stream takes place before and after restoration efforts to ensure that project goals are accomplished and to measure recovery of native fish populations. This may include genetic testing to ensure that they are genetically healthy.

What are the next steps for continued progress in conserving Westslope Cutthroat Trout?
Building on previous project successes, WDFW and KNRD are committed to conducting additional non-native fish removal and native fish restoration efforts. These agencies are also committed to clear communication and an open transparent process with the public about these efforts. Toward that end, public meetings will be held and announced in local newspapers, websites, and public areas, etc. You can also find information and announcements about current restoration efforts at:
http://www.seattle.gov/light/Boundary/fish.asp

Where can I find more information about the methods used for fish conservation?
The American Fisheries Society, WDFW, and the EPA are all good sources of information (links below) about how and why methods such as piscicide fish removal are used in conservation efforts. Extensive research has been conducted concerning the best methods of native fish conservation, and there are many examples of successful conservation efforts all over the world that employ similar methods to the Cee Cee Ah Creek pilot project. Links to additional information are provided below.

http://wdfw.wa.gov/licensing/sepa/2010/10064_ceecee.pdf (More information about the Cee Cee Ah Creek pilot project from WDFW)
http://www.fisheriessociety.org/rotenone/EradicatingIASFishNA.pdf (Overview of fish conservation using rotenone and detailed answers to common questions about its use and utility in fish conservation)
http://www.epa.gov/oppsrrd1/reregistration/REDs/rotenone_red.pdf (Technical information about the EPA approval of rotenone as a piscicide)